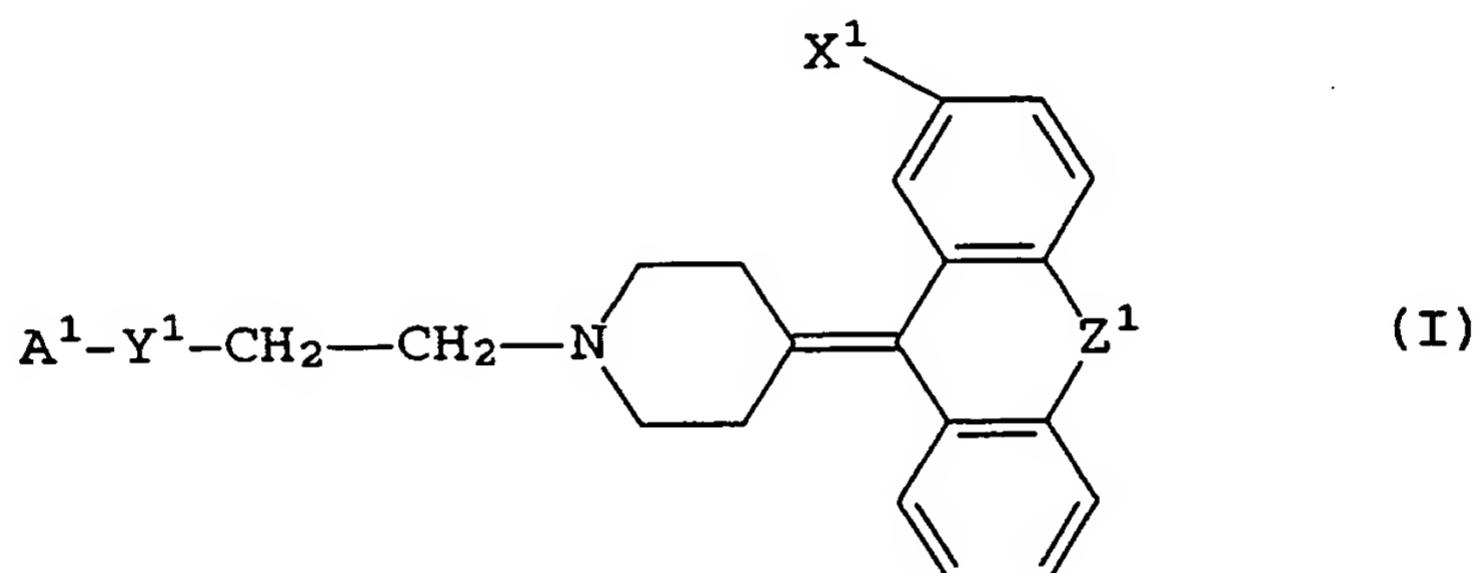


WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY LETTERS  
PATENT OF THE UNITED STATES IS:

1. A method of treating or preventing a disease caused by serotonin comprising administering effective amount of a piperidine derivative of general formula (I) or pharmaceutically acceptable salt thereof:



wherein A<sup>1</sup> represents an unsubstituted or substituted pyridyl, piperidyl, piperidino, morpholinyl, morpholino, thiomorpholinyl, thiomorpholino or piperazinyl group, a substituted alkyl group having from 1 to 8 carbon atoms, a substituted cycloalkyl group having from 4 to 8 carbon atoms, or an unsubstituted or substituted alkoxy group having 1 to 8 carbon atoms,

$x^1$  is a hydrogen atom or a halogen atom,

Y<sup>1</sup> is -CONH-, -NHCO-, -CONHCH<sup>2</sup>-, -(CH<sub>2</sub>)<sub>n</sub>- or -COO-,

wherein n is an integer of from 0 to 4, and

$Z^1$  is  $-\text{CH}=\text{CH}-$ ,  $-\text{S}-\text{CH}_2-$ ,  $-\text{S}-$  or  $-\text{CH}_2-\text{CH}_2-$ .

2. The composition of claim 1, wherein A<sup>1</sup> has a substituent and said substituent is

wherein R<sup>1</sup> is a hydrogen atom, an alkyl or alkoxy group having from 1 to 6 carbon atoms, an amino group which may be substituted by an alkyl group having from 1 to 6 carbon atoms, or an acylaminoalkyl group having from 1 to 6 carbon atoms,

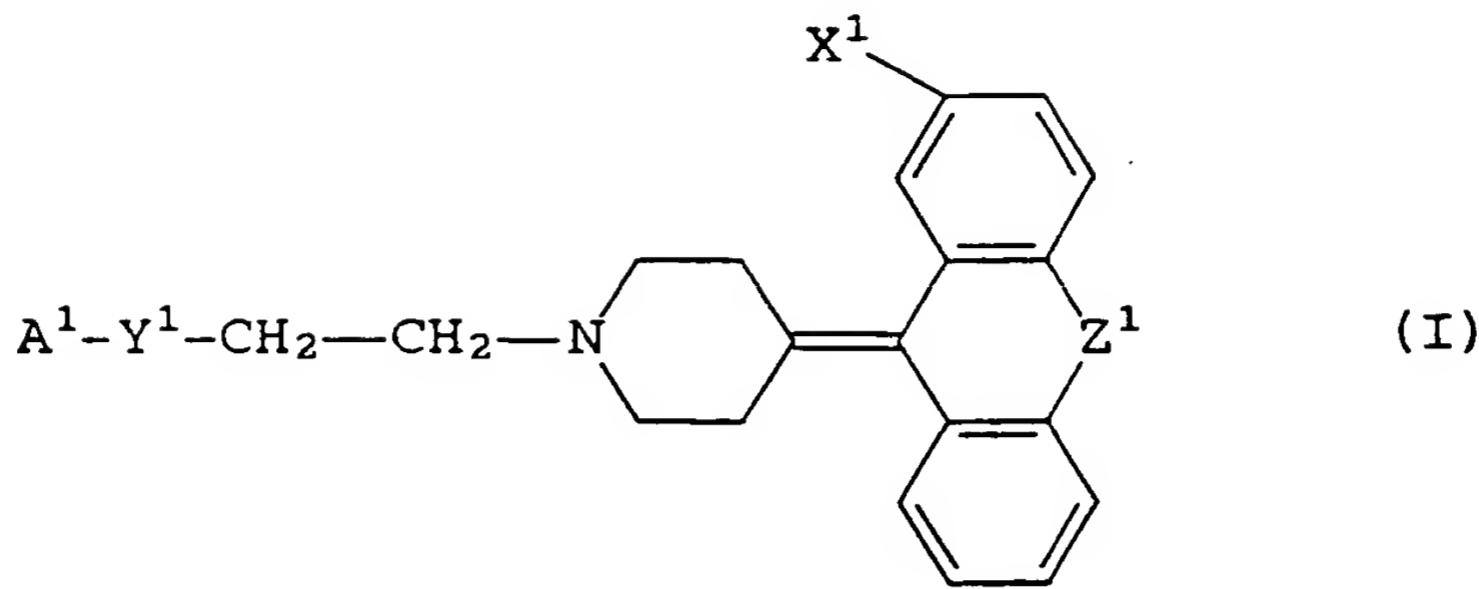
5 and

R<sup>2</sup> and R<sup>3</sup>, which may be the same or different, each represents a hydrogen atom, an alkyl, acyl or alkoxycarbonyl group having from 1 to 6 carbon atoms, or an aminocarbonyl group which may be substituted by an alkyl group having from 1 to 6 carbon atoms.

10 3. The method of claim 1, wherein said substituent on A<sup>1</sup> is formyl, acetyl, propionyl, butyryl, isobutyryl, valeryl, isovaleryl, pivaloyl, carbamoyl, N-methylcarbamoyl, N-ethylcarbamoyl, N-propylcarbamoyl, N,N-dimethylcarbamoyl, N,N-diethylcarbamoyl, N-formylglycyl, N-acetylglycyl, N-formyl- $\beta$ -alanyl, N-acetyl- $\beta$ -alanyl, N-methyl-N-formyl, N-methyl-N-acetyl, N-methyl-N-propionyl, N-ethyl-N-formyl or N-ethyl-N-acetyl.

15 4. The method of claim 1, wherein Y<sup>1</sup> is a -CONH-.  
20 5. The method of claim 1, wherein Z<sup>1</sup> is a -CH=CH-.  
6. The method of claim 1, wherein the piperidine derivative is 1-formyl-N-(2-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1piperidinyl)ethylisonipecotamide.

25 7. A method of treating or preventing platelet aggregation comprising administering an effective amount of a piperidine derivative of the formula (I) or a salt thereof or an active ingredient of a pharmaceutical composition:



wherein  $\text{A}^1$  represents an unsubstituted or substituted pyridyl, piperidyl, piperidino, morpholinyl, morpholino, thiomorpholinyl, thiomorpholino or piperazinyl group, a substituted alkyl group having from 1 to 8 carbon atoms, a substituted cycloalkyl group having from 4 to 8 carbon atoms, or an unsubstituted or substituted alkoxy group having 1 to 8 carbon atoms,

$\text{X}^1$  is a hydrogen atom or a halogen atom,

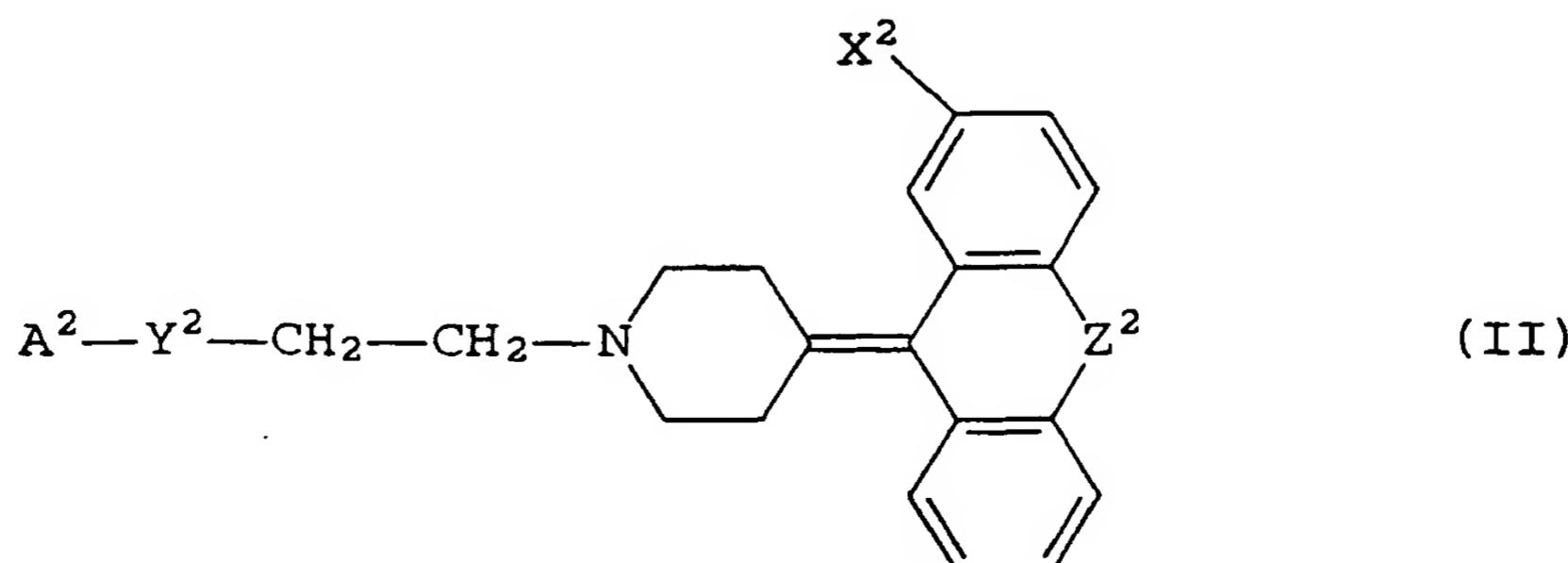
$\text{Y}^1$  is  $-\text{CONH}-$ ,  $-\text{NHCO}-$ ,  $-\text{CONHCH}^2-$ ,  $-(\text{CH}_2)_n-$  or  $-\text{COO}-$ ,

wherein  $n$  is an integer of from 0 to 4, and

$\text{Z}^1$  is  $-\text{CH}=\text{CH}-$ ,  $-\text{S}-\text{CH}_2-$ ,  $-\text{S}-$  or  $-\text{CH}_2-\text{CH}_2-$ .

8. The method of claim 7, wherein the piperidine derivative is 1-formyl-N-(2-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1piperidinyl)ethylisonicotamide.

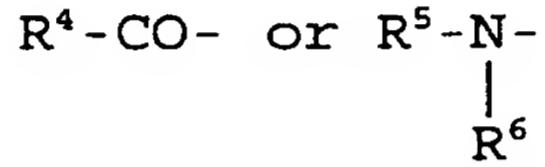
15 9. A piperidine derivative represented by the general formula (II) or a salt thereof:



wherein A<sup>2</sup> represents an unsubstituted or substituted piperidino, morpholinyl, morpholino, thiomorpholinyl, thiomorpholino or piperazinyl group, a substituted alkyl group having from 1 to 8 carbon atoms, a substituted cycloalkyl

5 group having from 4 to 8 carbon atoms, or an unsubstituted or substituted alkoxy group having 1 to 8 carbon atoms,

10 wherein suitable substituents include:



wherein R<sup>4</sup> represents an alkyl or alkoxy group having from 1 to 6 carbon atoms, an amino group which may be substituted by an alkyl group having from 1 to 6 carbon atoms, or an acylaminoalkyl group having from 1 to 6 carbon atoms.

15 R<sup>5</sup> and R<sup>6</sup>, which may be the same or different, each represents a hydrogen atom, an alkyl, acyl or alkoxy carbonyl group having from 1 to 6 carbon atoms, or an aminocarbonyl group which may be substituted by an alkyl group having from 1 to 6 carbon atoms, and

20 X<sup>2</sup> is a hydrogen atom or a halogen atom,

Y<sup>2</sup> is -CONH-, -NHCO-, -CONHCH<sup>2</sup>-, -(CH<sub>2</sub>)<sub>n</sub>- or -COO-,

wherein n is an integer of from 0 to 4, and

Z<sup>2</sup> is -CH=CH-, -S-CH<sub>2</sub>-, -S- or -CH<sub>2</sub>-CH<sub>2</sub>-.

10. The piperidine derivative of claim 9, wherein A<sup>2</sup> is  
25 substituted with a substituent selected from the group consisting of acetyl, propionyl, butyryl, isobutyryl, valeryl, isovaleryl, pivaloyl, carbamoyl, N-methylcarbamoyl, N-

ethylcarbamoyl, N-propylcarbamoyl, N,N-dimethylcarbamoyl, N,N-diethylcarbamoyl, N-formylglycyl, N-acetylglycyl, N-formyl- $\beta$ -alanyl, N-acetyl- $\beta$ -alanyl, N-methyl-N-formyl, N-methyl-N-acetyl, N-methyl-N-propionyl, N-ethyl-N-formyl, and N-ethyl-N-acetyl.

5 11. The piperidine derivative of claim 9, wherein Y<sup>2</sup> is a group -CONH-.

12. The piperidine derivative of claim 9, wherein Z<sup>2</sup> is a group -CH=CH-.

10 13. A compound selected from the group consisting of 1-methoxycarbonyl-N-(2-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)1-piperidinyl)ethylisonipecotamide, N-(2-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-piperidinyl)ethylisonipecotamide,

15 1-acetyl-N-(2-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-piperidinyl)ethylisonipecotamide,

1-t-butoxycarbonyl-N-(2-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1piperidinyl)ethylisonipecotamide,

1-carbamoyl-N-(2-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-piperidinyl)ethylisonipecotamide,

20 1-(N,N-dimethylcarbamoyl)-N-(2(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1piperidinyl)ethylisonipecotamide,

1-(N-acetylglycyl)-N-(2-(4(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1piperidinyl)ethylisonipecotamide,

25 N-(2-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)piperidinyl))ethylpipecolamide,

- N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-piperidinyl) )  
ethyl- (N-acetyl) pipecolamide,  
1-formyl-4- ((2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
piperidinyl) )ethylcarbamoyl) piperazine,  
5 N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-piperidinyl) )  
ethyl-4-aminocyclohexanecarboxamide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-piperidinyl) )  
ethyl-4-acetylamino cyclohexanecarboxamide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-piperidinyl) )  
10 ethyl-4- (1-t-butoxycarbonylamino) cyclohexanecarboxamide,  
4-5H-dibenzo [a,d] cyclohepten-5-ylidene) ) 1-2-ethoxycarbonyl-  
amino) ethyl) piperidine,  
4- (5H-dibenzo [a,d] cyclohepten-5-ylidene-1- (2-t-butoxy-  
carbonylamino) ethyl) piperidine,  
15 N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
piperidinyl) )ethyl-1- (1-amino) cyclohexanecarboxamide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-piperidinyl) )  
20 ethyl-1- (1-acetylamino) cyclohexanecarboxamide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
piperidinyl) )ethyl-1- (1-t-butoxycarbonylamino)  
cyclohexanecarboxamide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
piperidinyl) )ethyl-1- (formylamino) cyclohexanecarboxamide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
25 piperidinyl) )ethyl-1- (1-N,N-dimethylcarbamoylamino)  
cyclohexanecarboxamide,

- N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
piperidinyl) ) ethyl-4-aminobutyramide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -piperidinyl) )  
ethyl-4-formylaminobutyramide,  
5 N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
piperidinyl) ) ethyl-4-acetylaminobutyramide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
piperidinyl) ) ethyl-4-t-butoxycarbonylaminobutyramide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
10 piperidinyl) ) ethyl-4- (N,N-dimethylcarbamoylamino)  
butyramide,  
N- (2 (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
piperidinyl) ) ethyl-4- (N-methylamino) butyramide,  
N- (2- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
15 piperidinyl) ) ethyl-4- (N-methyl-t-butoxycarbonylamino)  
butyramide,  
1-formyl-N- (3- (4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1-  
piperidinyl) ) propylisonipecotamide,  
4- (5H-dibenzo [a,d] cyclohepten-5-ylidene) -1 (3-t-butoxycarbonyl  
20 aminopropyl) piperidine,  
1- (3-aminopropyl) -4- (5H-dibenzo [a,d] cyclohepten-5-  
ylidene) piperidine,  
1-formyl-isonipecotic acid 2- (4- (5H-dibenzo [a,d] cyclohepten-5-  
ylidene) -1-piperidinyl) ethyl ester,  
25 1- (2-aminoethyl) -4- (10,11-dihydro-5H-dibenzo [a,d] cyclohepten-  
5-ylidene) piperidine,  
4- (10,11-dihydro-5H-dibenzo [a,d] cyclohepten-5-ylidene) -1- (2-t-

butoxycarbonylamino)ethyl)piperidine,  
1-formyl-N-(2-(4-(10,11-dihydro-5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-piperidinyl)ethylisonipecotamide,  
1-(2-aminoethyl)-4-(9-thioxanthinidene)piperidine,  
5 4-(9-thioxanthinidene)-1-((2-t-butoxycarbonylamino)ethyl)piperidine,  
1-formyl-N-(2-(4-(9-thioxanthinidene)piperidinyl))ethylisonipecotamide,  
1-formyl-N-(2(4-(11-H-dibenzo[b,e]thiepin-2-fluoro-11-ylidene)-1-piperidinyl)ethylisonipecotamide,  
10 1-(4-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-piperidinyl)butyl)morpholine,  
1-(4-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-piperidinyl)butyl)thiomorpholine,  
15 1-(4-(4-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-piperidinyl)pentyl)morpholine,  
1-(4-(4-(10,11-dihydro-5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-piperidinyl)butyl)piperidine and  
1-(4-(4-(9-thioxanthilidene)piperidinyl)butyl)morpholine.